A European RI for the study and conservation of cultural heritage: the CHARISMA experience

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SEVENTH FRAMEWORK PROGRAMME

CHARISMA

Project's summary

CHARISMA,
Cultural Heritage
Advanced Research
Infrastructures:
Synergy for a
Multidisciplinary
Approach to
Conservation

22 Research Institutions
11 Countries

3 Networking Activities
3 Access Activities
1120 access days
3 Joint Research Activities

EC contribution: 7,6 ML
Duration: 4,5 years
[1 October 2009 – 31 March 2014]

Coordinator
University of Perugia, Italy

1 University of Perugia, Centre SMAArt, IT *coordinator*

2 CNRS-LAMS, at the Universitè P. M. Curie, Paris, FR

3 FORTH, Foundation for Research and Technology-Hellas, GR

4 The National Gallery of London, UK

5 Synchrotron SOLEIL, FR

6 CNR, Consiglio Nazionale delle Ricerche, IFAC / INO / ICVBC, IT

7 University of Torun, PL

8 University of Aachen, RWTH, DE

9 ATOMKI-HAS, Debrecen, HU

10 Lab. de Recherche des Monuments Historiques, FR

11 The British Museum, UK

12 Doerner Institute, Munchen, DE

13 Ormylia Foundation- Art Diagnosis Centre, GR

14 Opificio delle Pietre Dure, Firenze, IT

15 Museo Nacional del Prado, ES

16 RCE, Rijksdienst voor het Cultureel Erfgoed, NL

17 IRPA, Institute Royal du Patrimoine Artistique, BE

18 APRE, Agency for the Promotion of European Research, IT

19 LNEC Laboratorio Nacional de Engenharia Civil, PT

20 Budapest Neutron Centrum, Wigner RCP, HU

21 University of Bologna, IT

22 C2RMF, Centre de Recherche et de Restauration des Musées de France, Palais du Louvre, FR

engagement



key lines

interoperability among infrastructures
enhance research at the highest level

- Homogenisation in diagnostics and conservation (***interoperability***)
- Knowledge exchanges and sharing of resources (***communication***)
- Monitoring new technologies of interest in conservation (***new perspectives***)
- Interactions with other institutions and other EC initiatives (***openness***)

- Offer of access to the most advanced facilities and competences (***research otherwise impossible for users***)
- Develop research dedicated to improve the services to users (***innovations at or beyond the state of the art***)



CHARISMA

SEVENTH FRAMEWORK PROGRAMME

ARCHLAB, access 1

the archives of European Museums and Cultural Heritage Institutions

SIX ARCHIVES: The National Gallery, London, UK, *Opificio delle Pietre Dure*, Firenze, IT, Centre de Recherche et de Restauration des Musées de France, Palais du Louvre, Paris, FR, *British Museum, London*, UK, Museo Nacional del Prado, Madrid, ES *Cultural Heritage Agency of the Netherlands*, NL

MOLAB, access 2

the mobile laboratory for in situ non-invasive measurements

THREE MOBILE FACILITIES: University of Perugia, Centre SMAArt, IT; CNR, Consiglio Nazionale delle Ricerche, Istituto Nazionale di Ottica, IT; CNRS LAMS, FR

FIXLAB, access 3

the platforms of European large and medium scale facilities

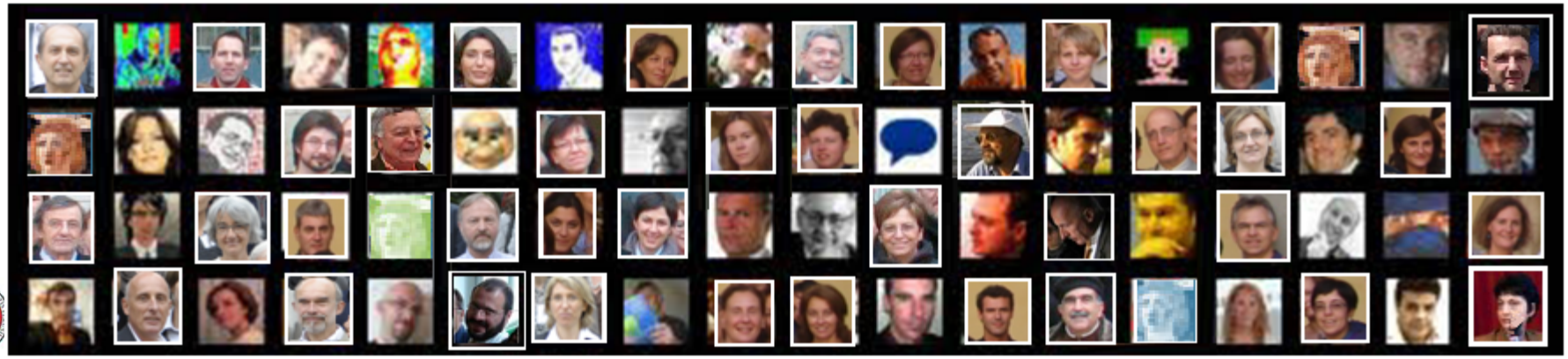
FOUR INSTALLATIONS in two platforms:

Platform A (France) : Fed. Rech. New AGLAE (CNRS and C2RMF); Synchrotron SOLEIL

Platform B (Hungary) : Budapest Neutron Centre - Wigner Research Centre for Physics; ATOMKI-HAS, Debrecen

project's assessment

>800	researchers have presented requests of access
270	access projects executed
>500	users belonging to
14	different countries, obtained
1.501	days of access to the open facilities
>50%	of users were women
6	new instrumentations set-up with new methodologies and best practices
10	advanced trainings
5	foresight events…



…with reference to paleo-anthropology

Users' projects

1. BRONZE_AGE_TECH. **Bronze-Age warfare in Eastern Europe. Development of technology and use of defensive armour**
   Marianne Moedlinger (Landesmuseum Karnt, Klagenfurt, AT)
   [ARCHLAB Access to C2RMF: data from museums of Musee de Vivenel, Compiegne, Musee d'Archeologie Nationale, St. Germain en Laye; others…..]
2. CUCUTENI. **Compositional study of Neolithic ceramic decorations from the Cucuteni culture.**
   Roxana Bugoi (National Institute Nuclear Physics, Bucarest, RO)
   [FIXLAB Access to NEW_AGLAE, Paris]
3. PROV_OBSI_LEVANT. **Study on obsidians' circulation and provenance in Northern Levant during Neolithic period**
   Molist Montaña (Universidad Autonoma de Barcelona)
   [FIXLAB Access to NEW_AGLAE, Paris]
4. OLD_TEETH. **Towards a better understanding of the diagenetic processes affecting fossil teeth in order to improve the reliability of the combined US-ESR method to date Early Pleistocene human occupations.**
   Mathieu Duval (Centro Nacional de Invest. Evolution Humana, Burgos, ES)
   [FIXLAB Access to NEW_AGLAE, Paris]

…with reference to paleo-anthropology

Users' projects

5. COPPER_AGE. **Study of Copper-Age shaft-hole axes found in *Caput Adriae*.**
Manuela Montagnani Korelj (University of Trieste, IT)
[FIXLAB Access to BNC-Wigner, Budapest, HU.]

6. BASSS. **Study and characterisation of Middle_BronzeAge smelting slags from Western Siberia.**
Roger Doonan (University of Sheffield, GB)
[FIXLAB Access to BNC-Wigner, Budapest, HU.]

7. OBS_NEOLITHIC. **Origin and distribution of obsidians in Poland**
Iwona Tabaka (Inst. of Archaeol. and Ethnol., Polish Acad. of Science, PL)
[FIXLAB Access to BNC-Wigner, Budapest, HU]

8. CREMENE.**Carpathian regional exchange in the Eneolithic and Neolithic eras.**
Bogdan Constantinescu (Universidad Autonoma de Barcelona, ES)
[FIXLAB Access to BNC-Wigner, Budapest, HU]

9. ….**others**…

the legacy

- new relationships *among* the consortium institutions more intense and strict than before

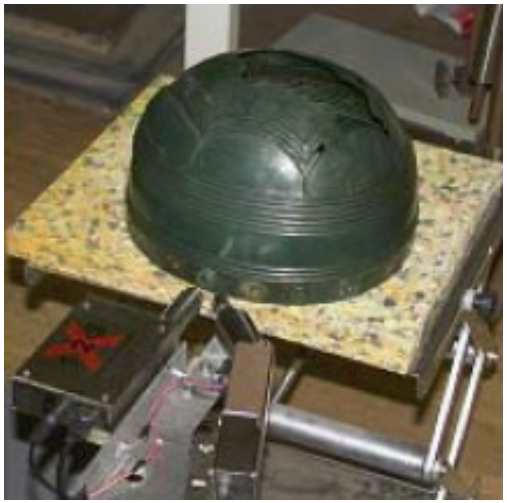
-*relations* with other institutions in Europe and beyond

-large increase of the *exploitation* of the most advanced techniques with positive feedbacks

- *new interest* of SMEs on the new technologies developed within joint research

- *new interest* of stakeholders, public and decision-makers





lesson learnt and recommendations

- management is a key point
  -reduce the effects of the complexity through organisation and clear attribution of responsibilities

- the access to the archives is essential
  -it can be certainly strengthened by ICT, but physical access remains particularly relevant when samples and collections are available…..

- the organisation of MOLAB interventions requires attention…
  -the effort associated to the logistic of the mobile equipment shoud be not underestimated
  - MOLAB is particularly effective in promoting effective encounters among professionals in the study and conservation of objects…



lesson learnt and recommendations

- access to large scale facilities are essential for the study of micro-details of composition and alterations of materials
  - *the number of users of synchrotron and neutrons is expected to further increase, especially among researchers carrying out alteration experiments in the laboratory*

- joint research allows new specific instrumentation to be designed and set-up driving innovation and new discoveries
  - *beyond the mere applications of pre-existing methods*





the international scenario



- the CHARISMA model pays the European research capacity and foster a sustainable, synergic, multidisciplinary working methods among *museums, heritage institutions, and research centres*, based on share resources across *countries*, *disciplines* and *technological domains*
- the model could be enriched and made accessible to new researchers through *associations*, project *clustering*, and *local and collective strong economic drivers*
- involvement of extra-European institutions is relevant not only for the intrinsic value of this research, but also to consolidate the role of *Europe as a global reference* for heritage studies

